# Varian STAR 850 MIB
# Instrument User Guide

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# Introduction

This document describes the 850 MIB and the associated extension cards.

**NOTE:** The socket-outlet shall be installed near the equipment and shall be easily accessible.

This is a Class A product.

In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

# Front View

**Status light**

Orange: Starting up or shutting down.

Green: Ready.

**Run light**

Blue: The remote workstation is connected.

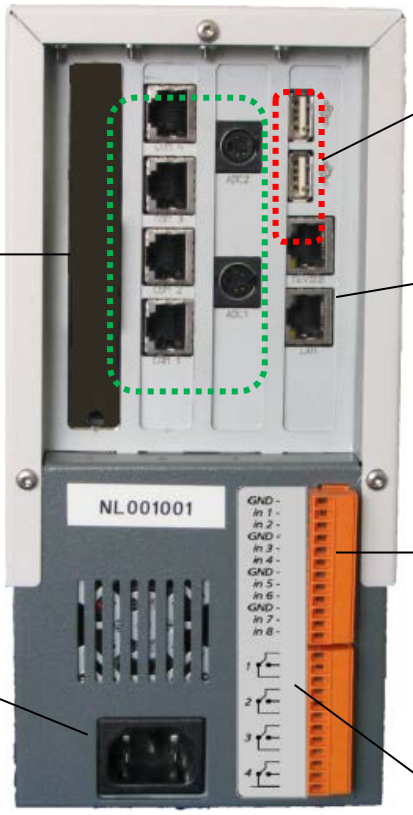
**Infra-Red sensor**

Not used

**On/Off button**

- Press once to start up the device,
- Press for around 2 seconds (until the status light turns orange) to soft shut down the device,
- Pressing for more than 5 seconds will force a hard shut down.

# Rear View




**Additional extension ports**
2 USB ports and 1 Ethernet port. Not used.

**Extension cards**
Connection to instruments. See next section for details.

**LAN**
10/100 Mbps Ethernet connection.

**Synchronization Inputs**
Active when In X is connected to GND or a 5V voltage is applied.

**Power**
Connect to **90~265V AC**, **47~63Hz** network.

**4 Relays**
With normally closed and normally opened contacts.

The limits for the relays contacts are: **30V AC/DC**, **2.5A** (protected with fuses).

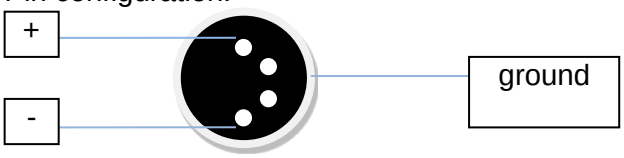
# Extension cards

There are three extension slots that can receive combinations of the following extension cards.

The extension cards provide the interface to the analytical instruments.

## 2-Channel ADC Converter Card

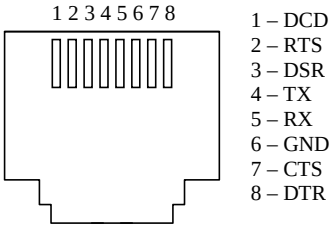
Pin configuration:




Differential input voltage limits -12V / +12V.

## 4-Port Serial Card

Pin configuration:

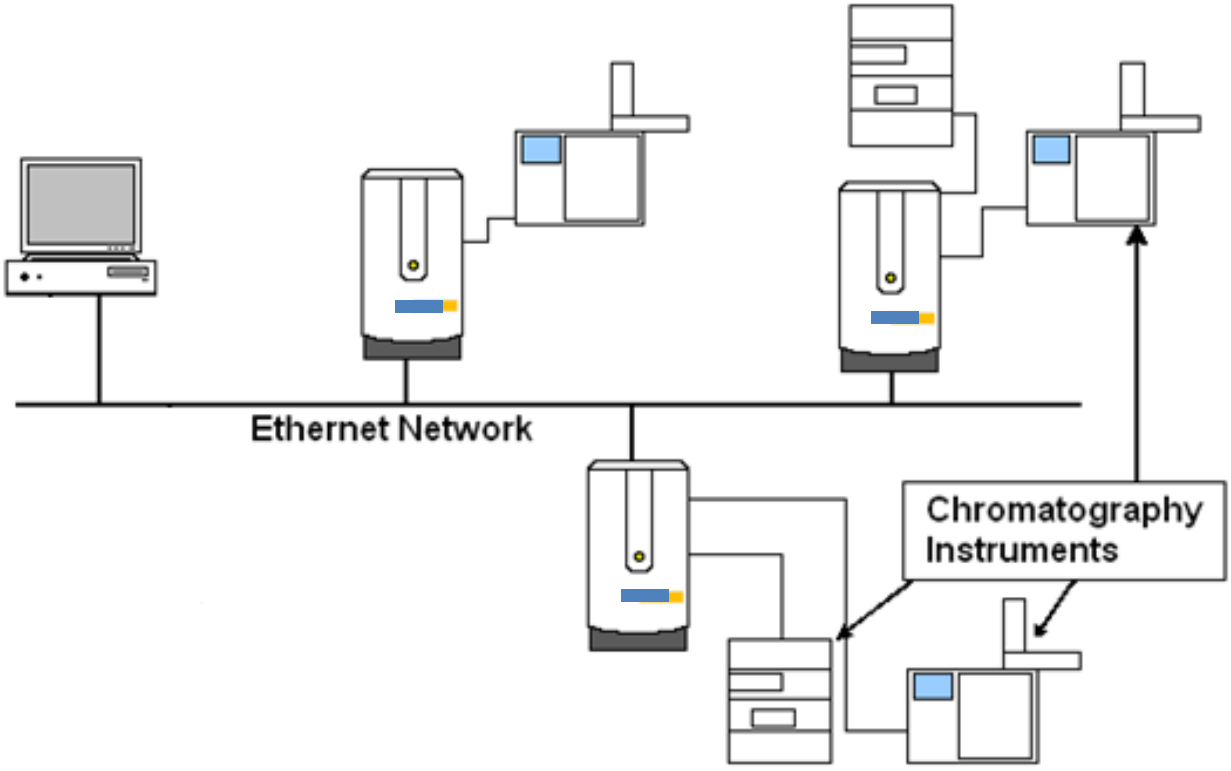



Maximum baud rate 115200 baud.

# Environment

The MIBs provide access to chromatographic instruments that have analog outputs or RS-232 communication, either by direct connection to a PC or across TCP/IP networks

The MIBs are controlled via CompassCDS software.



# Specifications

| | | |
|---|---|---|
| Physical | Number of board slots | 3 PCI internal connections |
| | Maximum number of ADC channels | 4 |
| | Maximum number of serial connections | 8 |
| | Power supply | 110 to 250 VAC, 50 to 60 Hz autosensing |
| | Dimensions | 5.1 (w) x 9.0 (h) x 9.3 in. (d) (13.0 x 22.8 x 23.5 cm) |
| | Weight | 6.8 lb (3.1 kg) |
| | Shipping weight | 9.9 lb (4.5kg) |
| System | Start inputs | 4 contact closures |
| | Contact closure output relays | 4 |
| | USB connections | 2 for future use |
| | Ethernet connections | 2 (1 for network connection & 1 for future use) |
| | System memory | 1Gb flash memory for firmware & analog data storage |
| ADC Board | Number of ADC channels | 2 asynchronous per board |
| | ADC ranges | +/- 1VFS, +/- 2.5 VFS, +/- 10VFS |
| | ADC range control | Software |
| | Electronic noise | <1 µV at 1 VFS, 10 points/sec |
| | Channel crosstalk | <1 µV |
| | Data rate | 1 to 100 Hz |
| | ADC resolution | 24 bit |
| | Dynamic range | > 1000,000:1 |
| | Common mode rejection ratio | 1 V range, <90 db |
| | Maximum input voltage without damage | +/- 12V |
| | Data buffering | 1 Gb compact flash memory (300 h at 100 Hz) |
| Serial Board | Serial interfaces | 4 independent per board |
| | Serial protocol | RS-232 |
| | Data rate | 110 to 19200 Bd |
| Ethernet | Data rate | 10/100 MHz |
| | Hardware | 10/100 Base T with RJ45 connector |
| | Protocol | TCP/IP |